Application No. 09/912,082 Office Action dated 07/14/2004 Response to O.A. dated 09/03/04

Amendments to the Claims:

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

What is claimed is:

- 1. (Cancelled)
- 2. (Cancelled)
- 3 (Cancelled)
- 4. (Currently Amended) A fingerprint authentication apparatus comprising:
 an imaging section comprising a first optical image sensor having infrared
 sensitivity and a second optical image sensor <u>having</u> sensitivity in the visible light region,
 said first and second optical image sensors being mutually neighboring whereby
 obtaining an image of an object to be fingerprint <u>autheticated</u> authenticated;

an image processing section, which performs image processing of data obtained from said image processing imaging section so as to obtain the fingerprint image; and

a fingerprint comparison section, which performs a comparison between said fingerprint image and a priorly stored fingerprint image;

wherein a fingerprint image is obtained with said object not in contact with said imaging section.

5. (Original) A fingerprint authentication apparatus according to claim 4, wherein said first and second optical image sensors are both selected from a group consisting of a CCD image sensor and a CMOS image sensor, a P-well depth in said first optical image sensor is deeper than that of said second optical image sensor, and a concentration thereof is less than that of said second optical image sensor.

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6. (Currently Amended) A fingerprint authentication apparatus according to claim 4, comprising:

an imaging section comprising a first optical image sensor having infrared sensitivity and a second optical image sensor having sensitivity in the visible light region, said first and second optical image sensors being mutually neighboring whereby obtaining an image of an object to be fingerprint authenticated;

an image processing section, which performs image processing of data obtained from said imaging section so as to obtain the fingerprint image; and

a fingerprint comparison section, which performs a comparison between said fingerprint image and a priorly stored fingerprint image;

wherein said first optical image sensors is selected from a group consisting of a CCD image sensor and a CMOS image sensor each having infrared sensitivity, and wherein said second optical image sensor is formed by providing an infrared-cutting filter on said first optical image sensor.

- 7. (Original) A fingerprint authentication apparatus according to claim 4, further comprising means for shining infrared light and visible light onto said object to be fingerprint authenticated.
- 8. (Cancelled)
- 9. (Cancelled)
- 10. (Cancelled)
- 11. (Cancelled)
- 12. (New) A fingerprint authentication apparatus comprising:

an imaging section comprising a first optical image sensor having infrared sensitivity and a second optical image sensor having sensitivity in the visible light region,

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said first and second optical image sensors being mutually neighboring whereby obtaining an image of an object to be fingerprint authenticated;

an image processing section, which performs image processing of data obtained from said imaging section so as to obtain the fingerprint image; and

a fingerprint comparison section, which performs a comparison between said fingerprint image and a priorly stored fingerprint image;

wherein said first and second optical image sensors are both selected from a group consisting of a CCD image sensor and a CMOS image sensor, a P-well depth in said first optical image sensor is deeper than that of said second optical image sensor, and a concentration thereof is less than that of said second optical image sensor.